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International Health Activities and the Part of the Voluntary Agency*

Wilbur A. Sawyer, M.D., LL.D.

AUTHOR emphasizes the rôle of the voluntary agency as pioneer in leading the way for official agencies.

TODAY we are at a most critical stage in the evolution of international organization to promote and protect health. The older pioneering organizations have been largely interrupted by the war, the emergency for which UNRRA and its Health Division were created is nearing its end, and now there is coming into being a new World Health Organization to take over all that seems best in the Health Division of UNRRA, the International Public Health Office in Paris, and the Health Organization of the League of Nations. To avoid disastrous delays an Interim Commission of the World Health Organization has been created to continue without interruption many international health functions which must not be permitted to lapse, and to plan an initial program for the permanent organization.

It is most timely and encouraging that the National Society for the Prevention of Blindness should have decided to consider at this meeting the problems of international health and the part which voluntary agencies can play in solving them. If the interest which you have thus shown is widely shared by voluntary agencies, we can look forward with confidence to an era of maximum results in the international health field. My high estimate of the value of the cooperation of voluntary agencies with international official organizations derives in part from the experience of one outstanding voluntary agency, the International Health Division of the

* Presented during the 1946 Conference of the National Society for the Prevention of Blindness, November 25-27, 1946, New York, N. Y.

Rockefeller Foundation, with which I was so long connected. When the Health Organization of the League of Nations was young, its financial support was not enough for an adequate progressive and forward-looking program. So the International Health Division supplied funds for a number of desirable projects, saving perhaps years of delay before full appreciation and support could have been secured from the League itself.

The greatest assistance which the new organization will derive from voluntary agencies will, however, not be financial. The co-operation of independent pioneering organizations, working intensely for special causes, but fitting their programs into the world strategy against disease, should be invaluable to the World Health Organization.

While the official international organization is engaged in the tremendous undertaking to improve health throughout the world, assisting national health services, investigating disease conditions, supporting related research, training health personnel, fixing standards, and administering international sanitary conventions, the voluntary agencies can for the present move more quickly into special and unforeseen situations, avoiding the delays due to the necessary safeguards of a large organization, and can take longer chances for a vital purpose than can an official body. After successful exploration by a voluntary body, the official organization is in the best position to bring about the widest diffusion of accepted methods for the greatest total benefit. In many fields the World Health Organization will do its own pioneering, but there will always arise situations in which the officers are not yet convinced, or funds may not be legitimately applied, but in which the voluntary agency can take a reasonable risk of failure in order not to lose the chance to blaze a new trail. You would be surprised to know how often governments with large health budgets have asked the International Health Division of the Rockefeller Foundation to appropriate small funds for a very necessary purpose because for the time being they could not be drawn from any of the official budgets.

The experience of UNRRA with voluntary agencies may be of interest. But first let me tell something of the nature of the activities of its Health Division. You will remember that UNRRA was

set up in Atlantic City late in 1943 to relieve a serious war emergency. The functions of the Health Division have been primarily: (1) to prevent war-engendered epidemics; (2) to restore national health departments as rapidly as possible; (3) to assign technical staff for consultation and cooperation with the national health authorities; (4) to determine requirements in medical and sanitary supplies to replace the war losses; (5) to revise and administer the international sanitary conventions for maritime and aerial quarantine; (6) to provide technical supervision of medical and sanitary personnel for the care and health protection of persons displaced by war; and (7) to train professional health personnel of the assisted countries through fellowships in foreign lands and by supplying teachers and lecturers for courses in their own countries.

The prevention of epidemics has been notably successful, and there has been no widespread epidemic of typhus fever, which was feared the most of all. In Poland, in the month of May of 1919, the first year after World War I, there were 33,929 cases of typhus fever, and in the corresponding month of the first year after the Second World War (1945) there were only 2,987. One year later the May figure for 1920 was 24,616, while that for 1946 was only 221. By September of 1946 the monthly figure was down to 47, and it was apparent that typhus was beaten and could be exterminated by the further systematic application of modern methods. Over 6,000,000 pounds of DDT were distributed by UNRRA to many countries for typhus control, and this insecticide has worked like magic.

Cholera has been serious this summer in many cities of China, but has undoubtedly been greatly reduced in incidence and particularly in mortality by UNRRA vaccines, medical supplies, and expert assistance. The Health Division's first brush with this disease occurred in June, 1945, before the liberation, when a team of 7 doctors and 2 sanitary engineers was flown from Washington to India and thence over the "hump" to Chungking to fight a cholera epidemic in that city. Six tons of supplies were also sent by air, but unfortunately one consignment was lost over the Himalayas. To limit and treat cholera during the past summer, it was necessary to send several large emergency air shipments of supplies across the Pacific directly from Toledo, Ohio, to China. These con-

tained cholera vaccine, intravenous fluids, including salt solutions and plasma, and syringes for their injection.

While cholera was completely absent from Europe, plague did gain a foothold, for it staged a small outbreak of 25 cases and 12 deaths in Taranto in Southern Italy. With UNRRA advice, assistance and supplies, it was quickly suppressed. Not only were rats destroyed, but their potentially infected fleas were also killed with DDT spray, and exposed people were dusted with the same insecticide. In China, plague was present, but there was no really extensive epidemic after the country was liberated. There was much concern over one small outbreak of pneumonic plague in Manchuria early in 1946, but it was limited to 39 cases with 36 deaths, the three recoveries being locally credited to treatment with a sulfa drug.

About 300,000 persons in China have kala-azar in an acute form, requiring treatment, according to the estimates of a combined survey team of UNRRA and the Chinese National Relief and Rehabilitation Administration (CNRRA). The situation became serious because of the lack of antimony drugs for treatment during the war. The American Red Cross and UNRRA have been sending these drugs, but the entire world's available supply is not sufficient. In fact, UNRRA has been forced to bring about an expansion of the world's manufacturing capacity in order to fill the need. Voluntary societies, particularly the missions in China, play an important rôle in the program, for their medical clinics take part in the ambulatory treatment of kala-azar, utilizing under a general scheme the drugs supplied to them as well as to the governmental institutions. The projected plan includes the use of mobile kala-azar clinics for villages in which there are no facilities for treatment.

Tuberculosis and venereal disease have increased greatly in the war-ravaged countries, and these diseases, which will require more prolonged and concerted attack, offer special opportunities to the voluntary agencies. Their conquest still calls for field experiment and ingenuity and a wider application of the most modern drugs and methods.

The health departments are well on the way to full function, but are handicapped in many places by the post-war financial difficulties of their countries. They will still need all the help they can get.

The administration of the international sanitary conventions will be handed over in good order to the Interim Commission of the World Health Organization on December 1, 1946, by UNRRA. The world war interfered seriously with the administration of the conventions of 1926 and 1933 for maritime and aerial navigation respectively, by the International Public Health Office in Paris. Accordingly, UNRRA undertook to revise these conventions, bringing them up to date, and gave to the Health Division and its Quarantine Commission the responsibility for administering the new conventions of 1944 and performing the duties which they imposed on UNRRA. This responsibility is now being transferred to the Interim Commission of the permanent World Health Organization.

The training of health and medical personnel has been satisfactorily accomplished with the cooperation of voluntary agencies. Perhaps the most appreciated of the projects in which voluntary agencies took a leading part were the medical teaching missions to Poland and Czechoslovakia. A group of medical educators was sent to each of these countries in the summer of 1946 by the Unitarian Service Committee with UNRRA's cooperation. The doctors and dentists of these lands had been isolated from new knowledge during the years of the war, and they greatly appreciated the lectures and demonstrations given by the missions at their various medical centers and schools. The Czechoslovakia mission included 13 lecturers and the one to Poland had 7, among whom were two dentists. As the missions did their work during the summer months, it was possible to draw distinguished professors from the medical and dental schools of America. This type of educational work could well be continued by voluntary agencies. The granting of future fellowships for foreign training would hasten the rehabilitation of the medical schools and the medical profession. Voluntary agencies will doubtless wish to supplement any fellowship programs of the World Health Organization and the national governments by affording training in their special fields of interest.

I must mention the UNRRA health training project in Ethiopia, which we hope to transfer to the World Health Organization. The country is without an indigenous medical or nursing profession. A beginning is being made by giving courses for "dressers" and for

sanitary inspectors, and soon the education of "nurses' aides" should commence. It is hoped that promising pupils may later be enrolled in a longer course for "medical assistants." Finally these beginnings, supplemented for a time by overseas training, should lead to medical, nursing, and sanitary engineering professions, and ultimately to a national health service staffed by an indigenous personnel. There are abundant opportunities for voluntary agencies to contribute to such a project and thereby help solve some of the many health problems of Ethiopia.

For these various achievements, it was necessary for the Health Division to employ many international professional persons. As of June 30, 1946, there were 1,134 of them, made up of 489 doctors, 30 dentists, 512 nurses, 36 sanitary engineers, and 67 from other professions. They came from 35 countries. This personnel worked in cooperation with the national health staffs, and with the assistance of professional persons from among the displaced persons, but I wish especially to recognize the cooperating individual workers and teams supplied by voluntary agencies.

In the agreement establishing UNRRA, signed on November 9, 1943, by the 44 United Nations, there was a clause reading "foreign voluntary relief agencies may not engage in activity in any area receiving relief from the Administration without the consent and unless subject to the regulation of the Director General." This restriction was doubtless necessary during the war and early post-war period, when the personnel of the voluntary agencies needed transportation, and supplies, and sponsorship, from the over-all recognized relief agency. With the winding up of the work of the Health Division in Europe and Asia, more direct and independent relations with local governments should become possible, but I strongly urge that there be at least an informal understanding between the voluntary agencies and the World Health Organization of the future.

Personnel of the voluntary agencies rendered valuable assistance in many projects of UNRRA, particularly in the health work with displaced persons in Germany and the Middle East camps and in various lines of activity in the Greece and Italy missions, and in China. Contributions in the field of health came from 50 voluntary agencies, representing at least 10 countries. They provided health

personnel numbering about 500 persons for work in Europe and an additional number for China. They contributed also medical supplies for the work in the devastated areas. In the early days of UNRRA's activities, doctors, nurses, and technicians were assigned for work in the Middle East camps and the Balkan countries. Later some of the agencies undertook to staff and supply specific medical projects which were supplementary to the work of UNRRA's Health Division. In Greece, voluntary agencies from several countries set up and ran medical dispensaries and clinics, training schools for midwives, tuberculosis clinics, centers for special surgery, and nurses' training projects. In Italy, a voluntary agency conducted an intensive nutrition survey. In Germany, a hospital for displaced persons was staffed, and in Austria a dental clinic was provided.

As for the prevention of blindness, the special province of this Society, UNRRA's experience has brought out little that is new, perhaps because it proved almost impossible to recruit ophthalmologists for overseas service after the military had filled their requirements. The needs are still great. At past times in Egypt and a few months ago in China, I was impressed with the amount of conjunctivitis, including trachoma. Where eye infections are practically inevitable as a result of factors in the environment, such as swarms of species of flies with an annoying predilection for the eyes, the situation must be attacked directly and scientifically. With new and effective insecticides like DDT and greater knowledge of the insects, I feel sure much could be done, and look forward to hearing of demonstrations of the effective control of these dangerous pests. UNRRA did supply the assisted countries with various drugs useful in preventing or controlling eye infections, such as silver nitrate for the eyes of the newborn, and sulfa drugs and even penicillin. Instruments for eye surgery were also made available.

And now to return to voluntary health agencies in general. Their responsibilities will not diminish because of better international health organization. On the contrary, they should increase with the resulting greater opportunities. Moreover, the successes which the voluntary agencies achieve in limited areas should be more quickly heralded throughout the world because of the effective

administration which we expect from the World Health Organization.

The voluntary agencies were doing some international work before the war and they obviously did much more in the UNRRA period. They should now prepare to lead new advances in their special fields wherever the problems are most serious and the opportunities for improvement are greatest. They should not, in my opinion, allow themselves to get into the permanent routine of disease control in competition with the health authorities. Their part is to do work which would otherwise not be done—ordinarily work in resourceful and imaginative pioneering, in turning up new knowledge and better methods and then in applying them in demonstrations of their effectiveness.

The Health Division of UNRRA now finds itself approaching the completion of the emergency work for which it was created. It will soon be ready to step aside, handing over to national and international organizations those of its functions which have proved their worth and are of permanent value. To make it possible for the Interim Commission of the World Health Organization to take over immediately certain continuing functions, the Central Committee of UNRRA has just authorized the transfer of a million and a half dollars to the Commission for expenditure in the present UNRRA-assisted countries during an ensuing year. It is with enthusiasm and high expectation that the Health Division of UNRRA makes way for the World Health Organization with its longer range and wider scope and also its relative freedom from preoccupation with emergency relief responsibilities such as were imposed on UNRRA by a desperate, war-torn world.

With the withdrawal of UNRRA from the health field in Europe at the end of December and a few months later in China, there will still remain a definite need for assistance in health work in many countries. It is hoped that voluntary agencies will continue, on a more independent basis and under more favorable world conditions, the work which they did so effectively under UNRRA's auspices. The voluntary health agencies cannot bow out as UNRRA will soon do. They are needed in an expanding battle to be waged with new weapons, with better world organization for health, and with a prospect of exceptional results.

Congenital Cataract Associated With German Measles*

Herbert C. Miller, M.D.

THROUGH the recognition of the association between German measles in the expectant mother and congenital defects in the offspring, the way is open to bring about a reduction in the incidence of physical and mental defects in children born of mothers who contracted German measles during early pregnancy.

IN 1941, Dr. N. McAllister Gregg of New South Wales, Australia, reported having seen 78 infants with congenital cataracts. This large series was the more remarkable since all the infants had been born during a single year, 1940. Dr. Gregg suspected that there might be some common explanation for this unexpected sudden increase in the number of infants with cataracts. He was impressed by the fact that all their mothers had had German measles (rubella) early in pregnancy. Investigation disclosed that a marked increase in the incidence of this disease had occurred in New South Wales in 1940, both in the civilian population and among the members of the armed forces.

An investigation into the relation between German measles and congenital cataract was immediately undertaken by a group of Australian physicians, under the direction of Dr. Charles Swann. By 1943, this group was able to collect an additional group of 49 women who had contracted German measles during pregnancy, and it was found that 31 of their babies had various types of congenital anomalies. The investigations of this group of physicians have continued and, in their last report, made in 1945, 136 cases of infants with congenital defects associated with rubella in the

* Presented during the 1946 Conference of the National Society for the Prevention of Blindness, November 25-27, 1946, New York, N. Y.

mothers have been discovered. The observations of the Australian physicians have been amply corroborated by many reports of similar cases by physicians in this country. There is no doubt but that there is a direct relationship between the rubella infection in the mother early in pregnancy and the presence of congenital cataracts and other anomalies in the product of that pregnancy. It is my purpose to review the facts that have so far been established and to indicate the lines along which further work needs to be done.

Aycock and Ingalls have collected all the pertinent facts in a paper appearing in the September, 1946, issue of the *American Journal of the Medical Sciences*.^{*} As indicated by their review of the literature, it is apparent that the time of pregnancy at which German measles is contracted is exceedingly important. Ninety-five per cent of all the infants in whom congenital anomalies have been discovered have been born to mothers who contracted this disease in the first three months of pregnancy. Furthermore, the type of malformation depends to a large extent on whether the mother contracted German measles in the first six weeks of pregnancy or the second six weeks.

| <i>Type of Anomaly</i> | <i>Stage of Pregnancy</i> |
|---|---------------------------|
| Cataracts | First 6 weeks |
| Deafness | First 9 weeks |
| Cardiac and mental deficiency | 5-10 weeks |
| Dental | 6-9 weeks |

Rather striking differences in the incidence with which the various anomalies are encountered have appeared in the reports of various investigators. These differences are presumed to be related to the period of pregnancy at which rubella was contracted. In Gregg's first report the 78 children all had cataracts, and 44 of the 78 had associated heart defects. In the report by the group headed by Dr. Charles Swann in Australia, there were only 23 of the 136 cases who had eye defects. There were 85 deaf-mutes, only six of whom had cataracts. These discrepancies are explained by the fact that the mothers of Gregg's infants had rubella earlier in pregnancy than those reported by Swann.

^{*} Aycock, W. Lloyd, M.D., and Ingalls, Theodore H., M.D., *Maternal Disease as a Principle in the Epidemiology of Congenital Anomalies*, *American Journal of the Medical Sciences*, Vol. 212, No. 3, September, 1946, pp. 366 ff.

The types of anomalies have been fairly well defined. The cataracts are usually subtotal and may be unilateral or bilateral. Associated with the cataracts are other ophthalmological conditions, such as nystagmus, sluggish pupillary reaction to light, difficulty in obtaining mydriasis, hypersensitivity to the topical use of atropine, the atrophic appearance of iris, and, frequently, microphthalmia.

The deafness observed in many of these children is not complete, as some sensibility for high-frequency waves is unimpaired. However, mutism almost always accompanies the deafness in these children. Anatomically, the organ of Corti is undeveloped. Reisner's membrane is absent. Many of these children have been found to be mentally deficient and microcephaly has been a frequent finding. Two of the outstanding characteristics of these infants are their small body size at birth and the considerable difficulty that is encountered in getting them to take adequate calories. The birth weight of a large group of affected babies in Australia was five pounds, 15 ounces, as against an expected seven pounds, eight ounces. These infants are not good prospects in many instances, even though the cataracts are unilateral or are successfully treated by discission.

In addition to the above, there is a fairly high incidence of cardiac anomalies. These are not serious from the point of view of endangering life, as they are almost exclusively not characterized by cyanosis. The lesions that have been observed at autopsy are a patent ductus arteriosus and patent intraventricular septal defects. These are not so-called "blue babies."

Some investigators have thought that the eruption of the deciduous teeth in these babies was delayed.

There are many important questions which remain to be settled. For instance, granted that the mother has German measles in the first trimester, what are the chances that her baby will not have some malformation? The information on this point is very meager at present. Thus far, a total of 11 pregnancies has been reported in this country in which the mother had rubella in the first trimester and 8 of the infants were entirely normal, thus making it about a 25 per cent chance that the infant will have some congenital defect. However, the number of cases is too small to warrant any con-

clusions. The Massachusetts State Board of Health is undertaking a survey of all cases of rubella in pregnancy in Massachusetts that occurred during the year 1943, and some additional data will be available when this study is complete.

How many children are there in the United States who have congenital malformations of the eyes, ears, heart, and brain as a result of German measles contracted by the mother? Nobody knows and it probably is not going to be easy to find out. The diagnosis of German measles is difficult. The disease is so mild as to escape detection unless the rash is noted. There is nothing distinctive about the rash that separates it clearly from drug rashes or other exanthemata. There is no laboratory test that can be made which differentiates rubella from anything else. It is purely a clinical diagnosis and it usually requires a large number of cases occurring in an epidemic before one can be reasonably certain of the diagnosis. Because of the mild nature of the disease, it is not reportable in many states and no quarantine is required. It was not considered to be important until its association with congenital defects was established.

It is important to determine whether or not there are many children with congenital anomalies associated with maternal rubella. A preliminary study is under way at the present time and is being supported by the National Society for the Prevention of Blindness which, it is hoped, will give some clue as to the incidence of this problem in the United States. A questionnaire has been drawn up and is going to be circulated among the pediatricians and obstetricians throughout the country, since they are the members of the medical profession who have had the most intimate contacts with the mother and child.

It is expected that further studies will have to be made before anything like a true picture of this problem can be obtained. The preliminary study should help in deciding whether or not experience with past births is sufficiently reliable to base a comprehensive survey on it. It may be that the diagnosis of rubella is so uncertain as to render histories of an attack altogether unacceptable. It may be that satisfactory data can be obtained only from future cases in which the maternal rubella has been carefully observed by competent physicians.

The question then arises as to whether or not rubella can be prevented. One attack, for all practical purposes, confers immunity, but so far no serum or vaccine has been developed which will immunize a person either actively or passively against this disease. Exposure of young girls to the disease is the only practical method at the present time of assuring against subsequent attacks. This is a wholly justifiable procedure in view of the mildness of the disease and the almost complete lack of any serious complications.

We also need to find out whether other infections besides German measles can cause congenital malformations in the fetus. Very meager attempts have been made to study this part of the problem and the results are altogether inconclusive so far. We do know, however, that the environment of the fetus can be altered by many other noxious stimuli besides the virus of German measles, and cause malformations. Not all so-called congenital defects are caused by the inheritance of defective genes. We know that, among other factors, the tissues of the fetus are particularly susceptible in the early weeks of pregnancy to X-ray waves and to the state of the mother's nutrition and probably to the effect of the Rh factor. The establishment of the association between German measles and congenital defects in the offspring has given added impetus to the study of all possible factors in the environment of the fetus which could conceivably cause defects to occur. Never before has there been so much hope as now, that something might be done to bring about a reduction of the large number of children who are born with some physical or mental defect.

Meeting the Need for Nurses in Sight Conservation*

Cora L. Shaw, R.N.

THE need for nursing personnel in eye work can be realized when the basic curriculum includes selected content on care of the eyes and the subject of eye nursing, is integrated more emphatically into related courses; and when the total number of registered professional nurses is increased.

SIGHT conservation may be interpreted as the maintaining of eye health. It implies a positive approach to the subject—a recognition of the importance of protecting this vital sense and developing it to its fullest capacity. The interrelationship between general health and eye health cannot be overemphasized. The maintenance of high health standards is an important factor in developing a fuller and more satisfying type of living for the individual, the community, and the world. I am reminded of a story of a busy professor who agreed to relieve his wife in the care of their small son for an hour or two, by taking the child into his study with him while he worked. He gave the child something to occupy his attention, but in a few minutes he was at his father's desk asking, "What shall I do now?" This occurred repeatedly, causing interruptions in the professor's work. He was at a loss to know what to do with his son, when he recalled having seen a map of the world in the morning paper. He found the map and cut it up into small and irregularly shaped pieces. He gave it to the boy saying, "Now put this map of the world together." The professor settled down to write, satisfied that this task would occupy the child for a considerable time. However, in a remarkably short time, the

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child was back at his father's desk with the map of the world put together completely and accurately. The professor was astounded and asked the child how he did it so quickly. His son replied, "Well, you see, there was a man on the other side, and I put him together. When the man was all right, the world was all right."

In order to maintain high standards of general health and eye health, we need nurses who recognize their part in accomplishing this and who are scientifically prepared to carry out the work. Sight conservation is an integral part of many nursing situations—in the hospital, in the public health field, in industry, and in schools. This work is by no means confined to the eye department of a hospital where eye diseases and abnormalities are treated. In the medical, surgical, obstetrical, and pediatric departments of a hospital there are constant opportunities for promoting sight conservation and teaching good practices relating to the care and protection of the eyes. The public health nurse is in a strategic position to influence members of the community to practice good eye health habits, to seek treatment early when necessary, and to eliminate false conceptions of eye treatment. The industrial nurse may make a valuable contribution to eye safety and the eye health of the worker by teaching the importance of eye safety devices, by seeing that even minor eye injuries are treated by a competent person, by securing adequate and proper lighting, and by teaching the relationship between general health and eye health. The school nurse can use her influence in obtaining proper lighting, better seating arrangements, screening tests, and parent education.

Nurses fall far short of accomplishing all they might in sight conservation. I believe the chief reason for this is a lack of knowledge. I wish that every nurse could know more about the care and protection of the eyes. To accomplish this, we must look to the basic curriculum in our schools of nursing. A relatively small proportion of the population in any community requires hospitalization for the treatment of the eyes. Therefore, in the average hospital experience of a student nurse, the opportunity for observing such cases may be quite limited. The course in eye nursing should include carefully selected subject matter which will give a fundamental understanding of the eye—its development, function, and diseases. In addition, a well-planned program of integration

with related courses is equally important. In 1942, a subcommittee of the Curriculum Committee of the National League of Nursing Education studied the eye content in the basic curriculum in 45 schools of nursing. Seventy-three schools were invited to participate in this study, and 45 of these accepted and completed their schedule for one or both sections of the study. The geographic distribution of these schools represents 23 states and the District of Columbia. The size of the schools varied—there being no very small schools and some very large ones. A high percentage of the participating schools offers student experience in an eye service. The study was divided into two sections: (1) an analysis of integrations with related courses; and (2) an analysis of the teaching experience in nursing in eye conditions. The study was accomplished by means of check lists and questionnaires completed by the schools. The conclusions and recommendations of the study are as follows:

"1. When the two sections of the study are considered together, it is apparent that the emphasis in eye teaching in many of these schools is on the treatment aspects (including nursing care), with relatively little stress on psychological, social, and educational implications of eye conditions.

"2. The amount of time devoted to the unit on nursing in eye conditions is of necessity brief. This necessitates the widest possible integrated teaching in the other courses. Some re-evaluation might well be done to determine the relative importance of present eye content of the various courses in order that some of the subjects which appear neglected may receive more attention. A pre-test before the beginning of the unit on eye nursing would serve to show the strengths and weaknesses of previous eye teaching. This could be followed by conferences between the eye instructor and the instructors of other courses as to the enrichment of eye content in certain courses.

"3. The content of the unit on nursing in eye conditions seems much too great for the time allotted. Careful consideration should be given to the selection of content in relation to presenting to the student such material as will give her a rounded picture of the most important eye conditions, their cause, prevention, treatment, social, psychological, and educational aspects. The student should also understand the diagnostic tests used and acquire some familiarity with their terminology. Some of this teaching can be done in the eye clinic.

"4. The value and practices of assignments to special eye services need further study. Consideration should be given to developing student records which would permit detailed analysis of student experience in such services. Where not all students can be given such experience, the development of electives and of aptitude tests might serve to bring this experience to certain students with special interest and special ability who, in the process of rotation on services, might otherwise miss this introductory experience. The opportunities for student teaching in eye clinics also need emphasizing. The number of hours spent in clinic sessions is not necessarily an index to the quantity or quality of student learning. There is, however, an irreducible minimum time below which we can expect very little teaching. A four-hour clinic assignment not supplemented by assignment to an eye ward should probably be looked on as an introductory observation period rather than an assignment. Similarly, a two-hour clinical assignment to supplement a special eye ward assignment can do little more than permit the student to observe the clinic routine. There are rich opportunities in the eye clinic for teaching the social, psychological, and preventive aspects of eye conditions. To utilize these to the fullest would require that the student be assigned to an eye clinic for a time long enough to permit her to take an active part in patient education. Naturally this also necessitates teaching attitudes and abilities on the part of the clinic supervisor and the clinicians.

"5. Where facilities are not available for student experience in a special eye service (either ward or clinic), the school is challenged to use every opportunity to present to its students such eye material as is available in its general wards and general clinics. Such schools also need a great deal of illustrative material. Again, careful records of student experience are necessary to analyze the use of the limited clinical material available. Emphasis on the eye content of other courses will help to offset the restricted experience. Building up of ward libraries with references on the type of eye conditions which are frequently found as complications will help the student to gain an appreciation of the relation of eye conditions to other bodily conditions."

If these five recommendations were accepted by all schools of nursing and introduced into their curricula, I feel confident that the nurse, upon graduation, would have a fundamental knowledge of eye health and its relationship to general health. This knowledge would result in a keener awareness of her opportunities and responsibilities in sight conservation.

The basic course in the school of nursing is not planned to prepare nurses for specialized fields. The nursing care of patients suffering from eye diseases requires that the nurse be skilled in the performance of nursing procedures for the treatment and comfort of such patients, and that she acquire an understanding of the psychological approach to such patients. These specialized techniques must be learned through graduate experience in an eye service, preferably in the form of postgraduate courses. We do not expect every nurse to have special preparation of this kind. A limited number of graduate nurses with such specialized preparation would meet the need for supervisors and head nurses in eye services in the hospitals and for consultants in the field of public health nursing. These well-prepared nurses could stimulate the interest of other nurses and guide them in the work of sight conservation.

Institutes, lectures, and demonstrations such as are conducted by the National Society for the Prevention of Blindness and other organizations, are extremely stimulating and helpful to nurses who have not had opportunities to become familiar with the work, either in the basic course in nursing or through graduate experience.

To carry out a satisfactory program of sight conservation in any of these fields of nursing, we must increase the number of nurses. At present we are all pressed for time and are carrying heavy loads. The nursing organizations are aware of this shortage and are making efforts to interest young women in the profession and to accomplish reforms which will make nursing more attractive.

In conclusion, I would suggest that we attempt to meet the need for professional personnel in sight conservation by:

1. Injecting into the basic curriculum more carefully selected content on the care and protection of the eyes and greater emphasis on the integration of eye nursing into related courses.
2. Providing graduate experience in the form of postgraduate courses, conferences, and institutes.
3. Increasing the total number of registered professional nurses.

The Effectiveness of the Services Rendered by the Glaucoma Clinic of the Illinois Eye and Ear Infirmary*

Peter C. Kronfeld, M.D.

THE author describes how a specialized glaucoma clinic can be maintained as a part of a general eye infirmary to the advantage of the efficiency of the infirmary as well as to the patient.

THE Glaucoma Clinic of the Illinois Eye and Ear Infirmary was organized in the early part of 1939 for the specific purpose of rendering to the glaucoma patients of the Infirmary more effective follow-up services than they had received in the regular clinics of the institution. In the words of its originator, Dr. Harry S. Gradle, the Glaucoma Clinic neither treats nor operates; it only observes and records. During its seven years of existence, the Clinic has adhered to this principle to the extent that all major decisions concerning the medical care of the patient are made, and all surgical actions taken by the attending ophthalmologists in whose clinic the patient first registered, and not by a member of the staff of the Glaucoma Clinic. Adherence to this policy has overcome the actual or merely theoretical opposition of the medical staff which may have feared that the organization of the Glaucoma Clinic would deprive them of the opportunity of seeing and caring for the glaucomatous patients. Because of the adherence to the policy of trying to be an accurate observer and helpful bystander and not a main actor, the Glaucoma Clinic has become an integral, generally accepted, part of the Infirmary clinics. It is not a clinic in the sense of the many other specialty clinics that have sprung up in the past 20 years and which, in principle, take care of all diagnostic, thera-

* Presented during the 1946 Conference of the National Society for the Prevention of Blindness, November 25-27, 1946, New York, N. Y.

peutic, and follow-up aspects of the particular specialty. Personally, I see no disadvantage to the mainly observing function of the Glaucoma Clinic.

This all may seem to you like a rather long-winded and indirect way of saying that the Glaucoma Clinic has, during the seven years of its existence, convinced the medical staff of the Infirmary of its good and useful purpose. But this fact in itself is a measure of the effectiveness of the Clinic since the medical staff, from the beginning, has been the best-informed and best-qualified critic of the activities of the Glaucoma Clinic.

The late Dr. Mark J. Schoenberg of New York City, perhaps the real father of the idea of the Glaucoma Clinic, has stated its four-fold purpose as follows:

1. Better service to patients
2. Concentrated opportunity for studying any aspect of glaucoma
3. Educational rôle
4. Center of research

I have in the past, and will in the future, stress the better service to the patient as a main feature of a glaucoma clinic. Even a very casual observer of the goings-on in a busy eye clinic will understand that the patient with only average good will, courage, and stamina finds the treatment, in a general eye clinic, of a disease as chronic and stubborn as most glaucomas are, too disheartening to continue for more than one or two years. The fact that Dr. Gradle's survey showed that during the period of from 1933 to 1937, only 4 per cent of all the glaucoma patients seen at the Infirmary remained under observation for two more years, is "most disquieting" but understandable.

In defense of the medical personnel, it should be said that in a busy out-patient department, it may be very difficult to find the time and necessary concentration for the exacting, sustained follow-up that is essential in most chronic glaucomas. It may even be more difficult and time-consuming to find a fitting and not too stale way of reassuring and encouraging the patient. By remedying these two shortcomings of a general eye clinic, the Glaucoma Clinic has scored its most striking success. The number of patients who

refuse to return for treatment has been reduced to approximately 15 per cent of all the active cases, which is a figure radically different from the "no-return" rate of 96 per cent in the period prior to the Glaucoma Clinic era.

The facts responsible for this low "no-return rate" are:

1. The appointment system is followed so closely that each visit to the Clinic does, on the average, not require more than one hour of the patient's time.
2. A close patient-doctor relationship is created by the fact that the same two, or at the most three, doctors have been in charge of the Clinic during the last four years. At each visit the patient is examined and given advice by one of these three doctors.
3. The patient remains under the close supervision not only of an ophthalmologist specifically interested in the follow-up of the glaucomas but also under the close supervision of a social service department specifically familiar with the social aspects of the glaucomas.

After registration in the Glaucoma Clinic, each new patient is sent to the Social Service Department where he is interviewed. During this interview the social worker attempts to understand the patient, what his eye condition means to him, how it will affect his relationship to his family, his job, and his future. Interpretation of glaucoma is given, and the patient is helped to see his rôle in carrying out the treatment. If it appears that surgery will be considered, the worker prepares the patient and explains the creation of an artificial drainage area, and what it is hoped will be accomplished, indicating always that it will not restore lost vision but will probably keep his present vision from getting worse.

The importance of keeping clinic visits is stressed and the patient is warned that, should there be a sudden change in his eye condition before his next appointment, he should come into the Clinic promptly.

The social worker in her first interview with the patient is on the lookout for factors which may interfere with the patient's ability to accept treatment and to return to the Clinic. The records of those patients who are able to go ahead on their own are filed into "follow-up" and are followed routinely by the nurse in the Glaucoma

Clinic. The patients who miss two successive appointments are sent a personal letter by the Social Service Department. Then, if they fail to respond, a home visit is made. It is the close cooperation between the specially trained medical staff and the specially trained social service staff of the Glaucoma Clinic which has brought about the low "no-return" rate of which we are very proud. (See Table 1.)

TABLE 1.—SOCIAL SERVICE REPORT OF GLAUCOMA CLINIC

| | <i>Downstate</i> | <i>Chicago</i> | <i>Total</i> |
|---|------------------|----------------|--------------|
| Cases on hand first of month of March, 1946 | 311 | 1804 | 2115 |
| New cases | 2 | 10 | 12 |
| | <u>313</u> | <u>1814</u> | <u>2127</u> |
| Discharged (deceased) | 25 | 155 | 180 |
| Left state | 2 | 63 | 65 |
| | <u>286</u> | <u>1596</u> | <u>1882</u> |

ANALYSIS OF CASE LOAD

| | | | |
|---|------------|-------------|-------------|
| Follow-up | 72 | 900 | 972 |
| Inactive | 214 | 696 | 910 |
| | <u>286</u> | <u>1596</u> | <u>1882</u> |
| Inactive: | | | |
| a. Low vision | 87 | 249 | 336 |
| b. Another clinic | 89 | 98 | 187 |
| c. Physical incapacity | 12 | 133 | 145 |
| d. Refuses to return | 18 | 107 | 125 |
| e. Moved—no address | 0 | 50 | 50 |
| f. Further care not necessary | 8 | 59 | 67 |
| | <u>214</u> | <u>696</u> | <u>910</u> |

Proceeding now to Item 2 of Dr. Schoenberg's list of the activities of the Glaucoma Clinic, its population of closely-followed patients affords an excellent opportunity for the study of many aspects of glaucoma. The Glaucoma Clinic keeps special records of all its patients and all entries on these records are made by the small staff of the Glaucoma Clinic only. This staff, as stated before, con-

sists of two or three ophthalmologists whose training, experience, and disposition qualify them for the job of objective, impartial observer and recorder in the follow-up of the glaucoma patients. After years of experience in the Glaucoma Clinic, these ophthalmologists have learned to recognize those features which serve best to characterize the course of the disease. The records of the Glaucoma Clinic thus have become more objective, more complete, and more to the point than the patient's regular clinic records. The 2,400 records which make up our present contingent of patients in the Glaucoma Clinic probably contain more factual material concerning glaucoma than any other collection of medical records of which I know.

Most of the new factual material derived from the findings of the Glaucoma Clinic has been published in the various ophthalmological journals. To quote just an example of the comprehensiveness of the material, at the last meeting of the American Academy of Ophthalmology and Otolaryngology, Dr. H. I. McGarry and I presented an exhibit on the course of glaucoma, based on the follow-up of 400 glaucomatous eyes over a period of at least five years.

I believe that only another glaucoma clinic will be able to make as comprehensive a report on glaucoma as ours. Because of the great variability of the perimetric and tonometric measurements which are the essentials in the follow-up in glaucoma, numerous checks and re-checks of each patient are necessary to determine whether the over-all course of the disease is stationary or progressive. And only in a glaucoma clinic will these checks and re-checks be feasible.

The educational value of the Glaucoma Clinic hardly needs mentioning. At the Infirmary each resident spends at least one-half day a week in the Glaucoma Clinic where he, together with the supervising ophthalmologist, is given the opportunity to examine the eyes of six to eight patients and to review and discuss their records. The shortage of personnel during the past three years has made it necessary to restrict the teaching activities of the Glaucoma Clinic to its intramural obligations. As soon as possible, the teaching of gonioscopy and the gonioscopic evaluation of glaucoma surgery to ophthalmologists not connected with the institution will be resumed.

You may conceivably raise the question of whether the Glaucoma Clinic has in any way changed the over-all effectiveness of the treatment of glaucoma patients at the Infirmary. This is a difficult question to answer, because of the lack of valid data concerning the pre-Glaucoma Clinic period. It is my feeling, however, that we are now treating glaucoma more effectively, as the result of the new knowledge that is being gathered in the Glaucoma Clinic.

This report is prepared jointly by the Director of the Social Service Department, Mrs. Alina Drake, and myself, representing the medical staff of the Illinois Eye and Ear Infirmary.

Meeting the Need for Professional Medical Social Workers in Sight Conservation*

Marcella C. Goldberg

PROFESSIONAL training of the medical social worker in eye work, for both hospital and community service, is emphasized by the author.

IN recent years, there has been a constantly increasing appreciation of the values of medical social service within the hospital, and also an increasing recognition of the place of the medical social worker in the community outside the hospital. The available professional personnel is not nearly adequate to meet the need. Medical social workers in the field of practice hear constantly about requests for ways and means to recruit students for specialization in the medical social area generally. What applies to the basic medical social work field certainly applies to the specialized area with which we are concerned, and we realize the lack of professional medical social personnel available for sight conservation.

There are two ways in which the medical social worker functions directly in the sight conservation program. The first is in the eye service within a hospital, and the second is in the community program. The function of medical social work within a hospital is sufficiently well known that a detailed description of the basic job is not needed. However, there has been for the past several years a definite trend to expand those services and to permit the worker in the hospital to function in the community, to help with community planning, with resource building, and, in general, to participate in the community health and welfare services. This does not in any

* Presented during the 1946 Conference of the National Society for the Prevention of Blindness, November 25-27, 1946, New York, N. Y.

way lessen her value within the medical setting but rather enhances it, as she is thus able to be of more help to her patients than she was when her services were more limited. An excellent example of this is Mrs. Eunice Wilson's article in the October, 1946, issue of the *Outlook for the Blind*,* in which she described the rôle played by the medical social worker in the approach to the needs of the preschool blind child. Here the medical social worker was able to offer help to the parents in relation to understanding the child's medical care and in relation to the special needs resulting from his handicap. Working with a large group of these children and with their parents, she recognized needs which the direct case work approach could not meet, and therefore stimulated a group approach which resulted in the summer class at Perkins for the parents of the children blind from retrolental fibroplasia. This is an illustration of the hospital worker's ability to extend into community planning, and might be as applicable to a group of partially seeing children as it was to a group of blind children.

The function of a medical social worker in a community program for the prevention of blindness is newer than the function of the medical social worker within the hospital setting. In some places the prevention of blindness worker, who is a medical social worker, functions where there is little, if any, trained professional medical social service available in the hospitals. Under these circumstances, even though she is employed by a separate agency, she may serve as the medical social worker within the hospital eye clinic if there is one; if not, she may serve in the same rôle for the so-called clinic patients who are seen in the ophthalmologist's private office. She may also give service to private cases on referral by the ophthalmologist, as for example in relation to the interpretation and carrying out of recommendations for sight conservation programs in the schools. We have active with our agency 55 children with sight conservation programs in rural areas; of these, 34 are private cases and 21 are clinic-referred.

Even in a city as large as Pittsburgh, with as many qualified medical social workers as there are in the hospitals, it is part of the function of the prevention of blindness department of the voluntary

* Wilson, Eunice W.: "A Medical Social Approach to the Needs of the Preschool Blind," *Outlook for the Blind*, Vol. 40, No. 8.

agency to serve in a consulting capacity to the medical social workers in the general hospitals. These workers feel the lack of special skills to meet the problems of patients with eye difficulties. Were the coverage more adequate for the eye department—in other words, were there a medical social worker trained in sight conservation—this service on the part of the community prevention of blindness worker would not be necessary. She would then be able to devote more time to the general educational aspects of the program.

The community worker is also responsible for interpretation to other agencies of the implication of eye diseases and for the meaning to the patient of partial vision or total blindness. One can see this in reference to the family agency dealing with an aged person whose vision is failing because of senile cataracts, or in the case of a children's agency concerned about a child whose problems center around his partial vision. The generic case worker usually needs interpretative service herself before she has sufficient understanding to meet the client's needs when they arise out of eye difficulties. The same service is often needed in connection with the schools, where the community prevention of blindness worker may serve as consultant on eye problems, and interpret recommendations for sight conservation. She may also carry the responsibility for establishing a sight conservation program for a child in his own school-room and interpret the child's needs and limitations to a teacher who has not been trained in the field of sight conservation. By acting in a consulting capacity, the community worker spreads her knowledge and information, shares responsibility and thus further educates the community and its agencies for the prevention of blindness.

To further the prevention of unnecessary blindness the medical social worker, regardless of the setting in which she works, has a real responsibility in community planning. She may participate in programs of health, welfare, assistance, rehabilitation, and education on local, state, and national levels. She may participate actively in legislative matters, as has been demonstrated by the Illinois Society's legislative program on ophthalmia neonatorum, and by the Philadelphia Committee's activities on anti-fireworks legislation. She may function with departments of public instruction on

sight conservation in the schools; with health departments on venereal disease control and other health measures; with welfare departments on program planning and consultative service for direct case work; and with rehabilitation and assistance in relation to the restoration of sight, the limitations imposed by partial vision, and the emotional problems centering around eye diseases. There is also the area of medical social consultation on state and federal levels in various health and welfare services. The eye medical consultant may well serve in her specialized field of medical social service on the same basis.

From the brief description of function of medical social work in sight conservation, it is evident that some thought must be given to training. General training of medical social workers is of course available from the approved schools of social work, not all of which, however, give emphasis to sight conservation. Perhaps the strongest impetus given to specialization in this particular field was the recent announcement by the National Society for the Prevention of Blindness of "the establishment of nine one-year scholarships of \$1,000 each for students interested in professional education to qualify for positions in the field of sight conservation and prevention of blindness. These positions, which require both community organization and case work skills, offer a variety of opportunities for staff workers, consultants, and executives. Positions are open in public and private prevention of blindness agencies, in hospitals, and in organizations offering medical care programs. The scholarship will provide for completion of the second year of professional education in medical social work; emphasis will be given to special medical information on eyes and to instruction in community organization. Upon completion of work at a school of social work, students will be required to attend a two-weeks' institute, which will be arranged by the National Society for the Prevention of Blindness, for orientation in prevention of blindness program planning." This very laudable scholarship program will supplant the former plan of the National Society for the Prevention of Blindness by which a three-months' course was offered at the Massachusetts Eye and Ear Infirmary in Boston, and a four-months' training program was given at Washington University in St. Louis. A report of the placement of the 44 students so trained is included

in an article by Elizabeth Gardiner written in 1942,* after the program had been interrupted by the war.

Unfortunately, most schools of social work include very little in their study content relating to ophthalmology and the implications of eye diseases. Usually the eye lecture is included in the series of general medical lectures and is given very little time. On the whole, the information which the average medical social work student gets on eye conditions is very little, hardly enough to acquaint her with the long euphonious ophthalmological terms and certainly not enough to make her aware of the meaning of partial sight and potential blindness as a factor in personality. An eye-conscious instructor, however, usually includes the implications of eye illness in other basic information, as in relation to the emotional problems arising out of diabetes, syphilis, nephritis, tuberculosis, etc. It is fairly rare for a student to be assigned to an eye service for field work unless that service be unusually large and with a specially trained worker, or unless the student is specifically placed in a specialized eye hospital. It might be of interest to have a study made in the various schools to find out how much time is devoted to the emotional aspects of eye illness, and what plans are made or might be made to include at least one eye case in the varied case load a student worker is expected to carry. Perhaps field work placements could be considered in prevention of blindness agencies for special research projects, for community organization experience, or for general field work placement, depending of course on the qualifications of the supervisor to assume the responsibility of a student.

The plan of the National Society for the Prevention of Blindness in relation to its scholarship program is notable because, after completion of the medical social training with its special emphasis on prevention of blindness and community organization, the student will be required to attend a two-weeks' Institute for orientation in prevention of blindness program planning. Such an Institute might well be arranged to include medical social graduates who are not scholarship recipients but who may be interested in or planning for placement in the sight conservation field. The National Society

* Gardiner, Elizabeth G.: *Demonstrations of Medical Social Work in Eye Clinics*, National Society for the Prevention of Blindness, Inc., 1942, Publication No. 385.

for the Prevention of Blindness has also had Institutes in the past which gave some basic theories on prevention of blindness to persons with varied backgrounds, both in education and in experience, who were already established in programs and who recognized the need for some training. The latter type of Institute is helpful but recognition must be given to the fact that it does not take the place of nor serve the same purpose as formal training.

Another form of supplementary training might be a supervised placement in an already established agency, the kind of thing one might call an apprentice training course. Here a person with generic social case work, exclusive of the medical, could, within a limited period, be given enough of an understanding of eye conditions, recommendations, and social problems surrounding eye illnesses to enable her to function fairly adequately in a community job. The same plan would not be accepted for placement in a hospital setting, where the emphasis is on medical social case work. In relation to a community program, one must remember that it is a creative thing, flexible enough to meet the needs in the local community as well as to suit the abilities and background of the person administering it. It differs decidedly from a program in a medical setting since it does not have the fixed and rather rigid policies of a hospital to which it must adhere. Of course, a community agency has its policies and limitations also, but they are usually more flexible than those of the hospital which of necessity has so many more involved procedures.

The field for medical social workers in the program for the prevention of blindness is fertile and comparatively sparsely filled. The need for more personnel is great and ways to meet the need are limited. Perhaps the following suggestions might serve to help meet this need in part: (1) an increase in the amount of eye teaching given in schools of social work generally, and specifically in the advanced medical social work courses; (2) investigation of the possibilities of using community prevention of blindness agencies for field work placements; (3) making regularly scheduled institutes of the National Society for the Prevention of Blindness available to medical social workers planning to enter the field of sight conservation; (4) broader use of the generic case worker in all social agencies to help further the prevention of blindness program;

and (5) a point which was not made before, but which is one that should be included in all discussions such as this—the raising of standards of personnel practices to a level that warrants interest of prospective applicants for education.

It is to be hoped that the scholarships offered by the National Society for the Prevention of Blindness at the New York School of Social Work, the University of Southern California, and Washington University in St. Louis, will attract more potential medical social workers to sight conservation programs, and will arouse further interest in this particular field in schools of social work generally. It is also to be hoped that the schools will give more emphasis to the implications of eye diseases, will include prevention of blindness activities in community organization courses, and will incorporate eye consciousness into their general programs.

Is Industry Measuring Up to Modern Standards of Eye Health and Protection?*

Leonard Greenburg, M.D.

THE author describes eye health and protection practices in industry as revealed by studies of the National Society for the Prevention of Blindness and of the War Labor Board.

EARLY in the war the National Society for the Prevention of Blindness decided to augment its industrial program to offset, insofar as possible, the expected increase in frequency and severity of injuries to eyesight which were expected to result from acceleration of production to meet the demands of the war.

Under war conditions tens of thousands of men and women, for the first time, entered the gates of manufacturing plants totally unfamiliar with the eye hazards incidental to their new employment. Experienced industrial workers, who had become partially immune through familiarity with the hazards of their respective jobs, found themselves working on new materials and new products, which in many cases involved hazards not common to their previous work. Demands for more and more output increased the hazard to both old and new employees. The challenge to the National Society for the Prevention of Blindness was obvious.

A study of industrial practices with respect to sight conservation was clearly the first step in the program. A consulting engineer was engaged to make this study and to prepare and direct the program. A group of 50 plants was examined with respect to their administrative and protective programs for the conservation of sight. An analysis of these findings disclosed deficiencies of practice and of

* Presented during the 1946 Conference of the National Society for the Prevention of Blindness, November 25-27, 1946, New York, N. Y.

understanding of the subject. An educational program was then prepared, based upon these findings.

Thousands of industrial concerns had to be served by mail because direct field contact was not feasible. The program was designed to begin with a concise coverage of the main story followed by specific detailed bulletins, each dealing with a distinct phase of the total program. The initial contact included a questionnaire on which the industrial executive could indicate by check marks the current practices of his concern. When returned to us, this questionnaire disclosed the weak spots of the program. Detailed information bearing on these points was mailed, and a covering letter on special conditions when needed.

Studies made in preparation for the program disclosed a substantial amount of data on the increase in production, saving in spoilage, and better use of manpower due to improvement in visual conditions of the workroom or the employees. The interest of the Society is centered on the conservation of vision, but the practical economic gains from better vision are of such magnitude as to arouse immediate interest and cooperation on the part of management. For this practical reason the industrial program emphasizes such gains and includes all factors which make for better over-all seeing conditions.

The War Production Board adopted the Society program on the grounds of the increase in production which might be realized through improvement of visual conditions in war plants. Under its auspices the National Society for the Prevention of Blindness was engaged to conduct the program. Through this arrangement approximately 25,000 war contractors were informed about the program. Employers of eight million workers asked for, and received, educational material and advice.

The government authorization for mailing stipulated that checking and returning the appraisal form must be entirely optional on the part of the industries. Nevertheless, employers of eight hundred thousand workers did fill out and return these appraisals. Some of the more important facts and conditions disclosed in these forms will shortly be discussed. First, however, I should like to refer briefly to a number of interesting outgrowths from the basic program.

The visual tasks of industry present certain eye problems and conditions not commonly found in non-occupational use of the eyes. It is important to bring these conditions to the attention of professional and technical personnel whose services might be required by industries seeking to improve visual conditions in their plants.

The first step taken by the Society in this direction was the holding of a Seminar on Industrial Aspects of Ophthalmology, under the auspices of the Society. This consisted of a series of ten lectures. Registration began with approximately 40, and increased to a total of 138 ophthalmologists and other personnel, before the end of the Seminar.

The following year the Seminar was enlarged and rewritten on postgraduate level. In this form it was presented as a conference by the Columbia University College of Physicians and Surgeons with the cooperation of the Society. This presentation was restricted to senior ophthalmologists of class-A medical schools, and to medical personnel from the government agencies who were cooperating in the War Production Board program. Seventy per cent of the class-A medical schools were represented by 51 ophthalmologists who attended the Conference.

As a result of this Conference 13 schools have so far introduced the subject of industrial aspects of ophthalmology into postgraduate, or, in some cases, undergraduate curricula. While in some cases a more extensive treatment might be desired, there is in all cases a recognition of the importance of this field of study. The director of the Society's industrial program has been assured that the subject will also be introduced in the course on occupational medicine at the University of Manchester, England, under the direction of Dr. Ronald Lane, who is now visiting the United States.

The text of the Columbia Conference on Industrial Ophthalmology has not yet been received from the printer. It seems fair to assume that when this and other lecture material become available there will be a substantial increase in the introduction of this subject in the medical school curricula, as well as an expansion in the treatment of the subject.

Another important outgrowth of the basic program is a state project in which one department, or workroom, in each of several

industries will be aided in the installation of a complete program for conservation and utilization of eyesight. These initial demonstrations will serve as a pattern for teaching eye conservation and for extending this work in industries throughout the state.

The program for improvement in vision in an industrial plant depends for success largely upon the services of professional and technical personnel working as a team. The need for such services is shown clearly by the questionnaires to which I referred earlier in this talk.

The information on the questionnaires is divided into two sections—the protective program and the administrative program. The protective program deals with the selection of suitable eye protective equipment, and its maintenance. The professional services included in the administrative part of the program are equally essential. Only through such services can we be sure of prescriptions for glasses suited to the job, proper placement of the worker, and best visual conditions in the workroom.

The appraisal forms undoubtedly show a condition substantially better than the general average in industry at large. This conclusion is based upon the assumption that only executives deeply interested in our subject would voluntarily fill out and return to the government appraisal forms disclosing serious and obvious deficiencies.

It must be remembered that there has been a great advance in procedures concerning eye conservation and utilization in industrial plants during the last few years. The program of the Society is the first organized activity toward bringing this information to the industries of our country. Through our contacts with industries we have sound reason to believe that lack of knowledge, and not willful neglect, accounts largely for the deficiencies which we have discovered.

In the protective part of the program the appraisal forms tell us that four-fifths of the plants do not require executives and other visitors to wear goggles *while in the plant*. This makes it difficult for the safety man to convince the workers of the need to wear goggles *at all times*.

Goggles and other protective equipment must be decently comfortable if they are to be worn throughout the working hours. Yet

only half of the plants make provision to adjust goggles for comfort. When the goggles have prescription lenses, adjustment must be made to insure the correct position of the lenses with respect to the eyes and the position of the work. This should be done by an optician. The ideal condition is to have this final adjustment made on the worker at his job, or by an optician who is so familiar with the nature of the job that he can do this in an equally efficient manner. Four out of five plants do not have this service.

Eight plants in every nine supply every exposed worker with individual goggles. While we should like to see this practice in all plants, the present showing indicates a growing realization of the need for individual protective equipment. Contrasted with the deficiencies in goggle service cited above, this relatively large figure is significant. It shows the need for education in the practices which are essential to insure the continuous wearing of the protective goggles which have been supplied.

The administrative section of the questionnaires shows less than half examine workers with respect to their visual characteristics. Only one plant out of every six makes the corresponding job analysis for minimum visual requirements for use in fitting the man to the job when he has been examined.

A lack of understanding of the function of professional personnel appears from the statement that special eye services are available in seven out of ten plants, and yet only one-fifth of this service is used to supervise screening for occupational vision, and still fewer make a periodic recheck of the worker's eyes.

Adequate illumination of the workroom is a major factor for both worker and management—eyestrain and fatigue are reduced, production is increased, and spoilage is reduced. Nevertheless, only four plants in every ten claim to have adequate illumination.

Conclusion

Without further statistics, it can be said that the general picture of the replies shows that:

1. Many plants are not measuring up to modern standards of eye health and protection.
2. There is a deficiency in the employment of professional and technical personnel.

3. The deficiency seems largely due to lack of appreciation of the nature and scope of professional services needed for an effective eye program.
4. Requests for information from employers of eight million workers are clear evidence of the desire of industrial executives to improve visual conditions in their plants.
5. That educational programs both for industry and personnel in all branches of eye service are essential to conservation and utilization of eyesight in industry.

Daylight in the Schoolroom

Winifred Hathaway

MAKING the best use of the eyes through the provision of good light, proper placing of desks, and other environmental factors is emphasized in this article.

APPROXIMATELY thirty million children, young people and adults attend the educational institutions of the United States of America—urban schools, rural schools, elementary schools, junior and senior high schools, vocational schools, colleges, and universities. Questions constantly arise regarding the facilities that these have to offer—teaching personnel, attention to health and safety, educational tools, physical equipment and environment. It is, perhaps, natural that many of these questions pertain to light, particularly daylight, for without the light and heat of the sun all living things would perish. Following a light with his eyes is one of the first indications of the ability of the very young child to see, and throughout life light guides his way.

Impressions of the outside world can reach the brain only through the senses and of these sight contributes by far the greatest proportion. But seeing is a complicated process; there must be something to see, the light by which to see, eyes through which to see, and the brain to interpret the impressions. If, therefore, eye tasks required by modern educational processes are to be accomplished, there must not only be light to see what these tasks are, but an amount and type of light that will send through the eyes such clear impressions that the brain may correctly interpret their meaning.

What of the thousands upon thousands of buildings housing these thirty million of the rising generation? What are architects, contractors, illuminating engineers, educators, designers of school furniture, publishers of textbooks and others doing toward pro-

viding adequate facilities? Research has recently made great contributions toward a better understanding of light and vision. As a result, it is the consensus that natural light is the most desirable; in it, the colors of the spectrum are perfectly blended. The distance of the earth from the sun makes possible correct diffusion and distribution, two of the most important qualities of good illumination. Glare can be avoided by the control of sunlight.

Outdoor light far exceeds indoor illumination. The educator is therefore anxious to know how much light is necessary for efficiency, ease and comfort of seeing. There is no answer that will meet the needs of every individual. The amount is determined by the type of eye task that is to be performed and the condition of the eyes that are to perform it. Young eyes are growing eyes and light is one of the essentials for their healthy development. Some time ago it was decided that even before any answer concerning desirable quantities of illumination to meet varying needs could be suggested, a way must be found to measure illumination. In order to avoid the difficulties arising from differences in units of measurement—a yard in one country, a meter in another—a unit of measurement of light must be agreed upon. After much research, a foot-candle was finally selected as this unit—the amount of light from a standard candle falling on a surface one foot distant in any direction from the light source. In order to make the necessary research, precision instruments had to be devised, but these were too expensive for general use, hence a small light meter was made available which, although not scientifically accurate, is proving a satisfactory aid in determining approximate amounts.

But again the question, how much light? A group of experts, after giving much study to the question, recently decided that a maintained minimum of 30 foot-candles be recommended for school lighting, with increased amounts for exacting eye tasks. To obtain the desired minimum in school buildings, natural light would have to be supplemented, in practically all cases, by artificial illumination. But since natural light is the most desirable, every effort should be made to use to advantage all that is available. In order to do this many things must be taken into consideration: the orientation of the school building, the effects of climate, and seasonal and diurnal changes.

The initial step, therefore, is so to plan the school building that the best possible natural light may result. But this would be of little value unless such light were correctly used. On a clear, sunny day approximately 200 foot-candles may be obtained on working surfaces near the window. According to the law of physics, this decreases according to the square of the distance from the light source. Hence on working planes farthest away from the windows there may be too little light for the meter to register. In planning the building, consideration must be given to the fact that the best light comes from the top of the windows. If these are low, desirable light will travel only a short distance across the room. In order, therefore, to obtain the best results, glass area should reach as near to the ceiling as possible and no room should be wider than twice the height of the windows from the floor. Glass area should approximate twenty per cent of the floor area. Narrow mullions between windows help increase the glass area and prevent shadows.

Windows should be placed as near to the back wall as possible in order to provide illumination for seats in that area. They may also extend near to the front wall provided that seats are correctly placed and a type of chalkboard installed that does not cause a glare. Glare not only interferes with comfort and ease of seeing, but with efficiency. The part of the front wall nearest the windows may be covered with tagboard or burlap and used for bulletin or display material.

Much has been written about unilateral lighting to the left of the pupils. Recent researches indicate that variations from this are permissible and probably will result in satisfactory illumination, provided that windows at the back or at the wall side of the room are placed high enough above the floor to prevent crosslights and shadows or the shadow of the child from falling on his work.

But no matter how much illumination is provided, unless ceilings and walls reflect the light, little is gained. A white ceiling has a reflection value of approximately 80 per cent. Light gray-green or cream walls reflect anywhere from 50 to 70 per cent, whereas dark brown or dark green walls give back only approximately 7 per cent of the light that falls upon them. Glossy ceilings, walls and woodwork, on the other hand, cause a reflected glare which may be sufficiently irritating to affect not only efficiency, comfort and ease of seeing but the general health of the child.

Recent researches point to the benefit resulting from light-colored floors as well as from light-colored walls and woodwork and also indicate that desks and other furniture in the room should be light in color because of the good reflection value, and also to prevent too great a contrast between the desk top and the white or light cream paper in current use.

Light, gray-green chalkboards not only harmonize with the rest of the room and have high reflection value, but offer sufficient contrast to white chalk to insure good visibility. In many classrooms blackboards on three sides of the room "eat up" most of the light intended for the children. If such boards have been installed and cannot be replaced, covering them when not in use with light-colored shades will be of help.

Since the best light comes from the top of the windows it is evident that shades should not be hung there. The most satisfactory plan is to place at the center of each window two buff or light gray shades of translucent material of a texture that will not crack, one shade to pull up and the other, down, with a metal bar between rollers to prevent streaks of light. It is poor economy to place the roller of the upper shade below the other. In such case, in order to be able to manipulate the shades, one of the rollers must be fastened further out than the other, causing that shade to pull away from the window at the sides, thus allowing irritating streaks of light to enter the room. All shades should be wide enough to prevent a similar result. This usually means that unless the windows are deeply recessed, rollers must be fastened to the mullions.

The arrangement of seats and desks is an important factor, especially if unilateral light is provided. The rows of desks nearest the window may be turned away from them at an angle sufficient to prevent glare from the skyline, but not great enough to cause the child's shadow to fall on the working plane. As the rows recede from the window, the angle may be lessened so that all children face the front chalkboard, thus avoiding strained and uncomfortable posture. Seats and desks should not only be movable and adjustable and in a size suited to the individual, but should be adjusted as necessary according to the growth of the child. Desks that lift to an angle add to efficiency and comfort of seeing by making possible desirable focusing of the eyes and providing in-

creased illumination; they are also an aid to correct posture. In cases in which such desks cannot be obtained, desk easels may be made by the pupils in the school workshops.

The left-handed child should be given special consideration. His seat and desk should be so placed that light will come over his right shoulder and thus prevent the shadow of his hand from falling upon his work and interfering with efficiency of seeing.

The eye condition of all pupils should be taken into account. If it is such that the eyes are unable to carry their full share of the complicated process of seeing, eye tasks must be made easier and illumination increased. People with astigmatism need much more light than those with so-called normal vision, hence special consideration should be given to the placement of seats for astigmatic children. Careful attention must also be given to children with photophobia, especially to albinos to whom glare is intolerable.

In the great majority of classrooms the natural lighting must, of course, be supplemented by artificial illumination if desirable results are to be obtained. Installations, whether of incandescent or fluorescent lamps, must be so carefully considered that the accepted requirements are met—a sufficient amount of light for the task to be performed, correctly diffused, distributed and directed, and—perhaps most important of all—without direct or reflected glare.

Modern educational ideas stress the participation of those directly concerned. If the principles of illumination and the effect not only on eye health and efficiency but on the general health are understood by the teacher and explained to the pupils in a way they can understand, they will be interested in using the light meter, arranging seats and desks in the most desirable positions, covering glass doors or transoms that cause a glare, repainting shiny geography globes, removing glossy surfaces from desks and refinishing them in a light stain in dull finish, and placing shades correctly to control natural illumination. If, in addition, interest is aroused in the eyes of animals—that pet puppy or kitten, the elephant at the circus, different species of birds, insects, fish—the children will be all the more ready to learn how to take care of that most precious of their own possessions, eyes that see.

Note and Comment

National Society Staff Resignations and Appointments.—Readers of the REVIEW will learn with regret that Mrs. Eleanor Brown Merrill, executive director of the National Society for the Prevention of Blindness is retiring as of March 1, 1947. Her twenty-five years of service, first as secretary, then as associate director, and for the past eight years as executive director, have been productive of many advances in sight conservation work. She was active in the initiation of many of the Society's projects, notably preschool vision testing; training of medical social workers in eye work; and international as well as Pan-American prevention of blindness programs. Though her co-workers near and far will miss her gracious and constructive cooperation, they will join the Society in wishing her many years of well-earned leisure. Mrs. Merrill is being succeeded by Dr. Franklin M. Foote, whose appointment as medical director was announced in the Fall REVIEW.

The Society's staff has also been augmented by the appointment of Miss Marguerite M. Furey, R.N., as consultant in nursing activities. Miss Furey brings with her a rich experience in public health activities, having served for some years as district supervising nurse with the New York City Health Department.

Summer Courses.—Announcements have been received that the following courses for the preparation of supervisors and teachers of partially seeing children will be offered during the summer of 1947:

ELEMENTARY

Florida State College for Women, Tallahassee. June 16–July 23. An intensive six-weeks' workshop. Credit—6-2/3 semester hours of college graduate credit. Instructor—Miss Marguerite Kastrup, Supervisor, Braille and Sight-Saving Classes, Northern Ohio. Information may be obtained from Dean R. L. Eyman, School of Education, Florida State College for Women.

Wayne University, Detroit, Michigan, Special Education 293. June 23–August 1. An intensive six-weeks' course. Credit—6 credit

hours. Instructor—Miss Edith Cohoe, Assistant Supervisor, Braille and Sight-Saving, Detroit Public Schools. Information may be obtained from Mr. John W. Tenny, General Adviser, Special Education, Wayne University.

Illinois State Normal University, Normal, Illinois. June 30–August 22. Graduate and undergraduate credits. Course approved by the State Department of Public Instruction as qualifying teachers to meet requirements of Illinois Plan of Special Education. Information may be obtained from Dr. Rose E. Parker, Director, Division of Special Education, Illinois State Normal University.

Teachers College, Columbia University, New York, N. Y. July 7–August 15. Six-weeks' course; no demonstration class. Credit—4 points. Instructor—Miss Josephine Taylor, Educational Adviser, Braille and Sight-Saving, State of New Jersey. Information may be obtained from Dr. William B. Featherstone, Head, Department of Education of the Exceptional, Teachers College, Columbia University.

ADVANCED

Wayne University, Detroit, Michigan, Special Education 294. (Prerequisite: elementary course). June 23–August 1. An intensive six-weeks' course. Credit—6 credit hours. Instructor—Mrs. Margaret (Soares) Polzien, Former Supervisor of Braille and Sight-Saving, Detroit Public Schools. Information may be obtained from Mr. John W. Tenny, General Adviser, Special Education, Wayne University.

Directory of Ophthalmologists to be Published.—The American Board of Ophthalmology announces that a directory of all diplomates to January 1, 1947, will be published shortly after that date. This directory will be arranged alphabetically and geographically. No biographical material will be included. Every effort will be made to make this directory accurate. Diplomates who have not already done so should notify the Board office at once stating their name and address exactly as they wish them listed. The price of the book will be \$3.00 postpaid.

Diplomates are requested by the Board, to keep the office informed of all changes of address so that the files can be kept up to date.

College Initiates Division of Special Education.—Indiana State Teachers College, at Terre Haute, Indiana, has opened a new Division of Special Education, charged with a threefold function: (1) the training of teachers, supervisors and administrators of special classes and special education divisions for public school systems, and for state schools for the seriously handicapped; (2) the training of non-medical technicians and consultants (professional personnel other than teachers) who contribute to the education of exceptional children; and (3) the dispensation of clinical services to children and adults (both on and off campus) who have academic, psychological, or sensory perception problems, or who are in need of vocational counseling for placement or adjustment.

This expansion of services and teacher education at Indiana State Teachers College comes just prior to the revision of the Special Classes Law in the State of Indiana, now assured of passage in the current Assembly. The amended bill, drafted by Dr. Bernadine G. Schmidt, director of the Division, will provide special classes, as well as medical, dental and psychological services for mentally, physically, and emotionally handicapped children from the ages of three to eighteen, at full reimbursable cost by the state. In addition, a director of Special Education is established under the Department of Public Instruction to coordinate and integrate all services for exceptional children in public day schools and state institutions. The bill will provide services for 41,887 children in the state, between the ages of six and sixteen, who until now have been without educational facilities.

Already over 400 requests have been received from teachers over the country, who are interested in enrollment in the Division of Special Education at Indiana State, in order to learn how to better provide for handicapped children.

National Conference of Social Work.—The National Society's part in the National Conference of Social Work, San Francisco, is devoted to a meeting on the Rôle of Medical Social Service in the Field of Sight Conservation. The presiding officer is Dr. Wilton L. Halverson, director of Public Health, State of California Department of Public Health, San Francisco. The following topics are

included: "The Developing Use of Medical Social Workers in the Sight Conservation Movement," Mrs. Elizabeth Payne, associate professor, Graduate School of Social Work, University of Southern California, Los Angeles; and "Opportunities for Sight Conservation in Medical Care Programs," Eileen E. Lester, regional medical social consultant, United States Children's Bureau, Washington, D. C. Edith M. Baker, director, Medical Social Work Unit, Division of Health Services, United States Children's Bureau, Washington, D. C., is listed as a discussant. Dr. Franklin M. Foote, executive director, and Virginia Smith Boyce, administrative assistant, are representing the National Society at the Conference.

Conference on Problems of Exceptional Children.—Sponsored by the School of Education, Syracuse University, in cooperation with the George Davis Bivin Foundation, Cleveland, Ohio, and the Psychological Services Center, Syracuse University, a conference on mental hygiene and the problems of exceptional children is planned for May 2 and 3, 1947, to be held in the Auditorium of the Maxwell School of Citizenship, Syracuse University. Two of the twelve papers are of special interest to teachers of partially seeing pupils: "The Handicapped Child in a Normal World," by William M. Cruickshank, director of Special Education, Syracuse University; and "Helping the Exceptional Child in the Regular Classroom," by Maurice Fouracre, director of the Department for the Education of the Handicapped, New York State College for Teachers, Buffalo, New York.

REVIEW to Publish National Society's Conference Papers.—Beginning with this issue of the REVIEW, various papers presented during the Society's recent three-day Conference, held in New York City, November 25-27, will appear in several issues of THE SIGHT-SAVING REVIEW, and a number of them will appear as separate reprints.

Optical Aids for Subnormal Vision.—The Committee on Sensory Devices of the National Research Council has available a limited number of reprints on a condensation of a "Report on a Survey of Optical Aids for Subnormal Vision," by V. S. Ellerbrock, recently

published in the *Journal of the Optical Society of America*. There are also available a limited number of copies of the original unabridged report. This report, which was prepared to guide the Committee in formulating a program of research, deals with the theory and practical aspects of telescopic spectacles, loupes, reading-glass magnifiers and projection systems, as well as with recommendations for possible improvements in these devices. Copies of either of these reports will be mailed to professionally interested persons on request to the Dartmouth Eye Institute, 4 Webster Avenue, Hanover, New Hampshire.

British Ophthalmologists to Meet.—The Annual Congress of the Ophthalmological Society of the United Kingdom will be held in Glasgow, on March 27, 28, and 29, 1947. The President's address is entitled "De Senectute," and the subject for discussion will be "RhinoLOGY in Relation to Ophthalmology," which will be opened by Dr. John Marshall, ophthalmic surgeon, Mr. Gilbert H. Howells, ear, nose and throat surgeon, and Dr. R. McWhirter, radiologist.

St. Louis Society Loses Valued Worker.—We are grieved at the announcement received from the St. Louis Society for the Blind, of the death of its executive secretary, Miss Emily M. Spencer. Miss Spencer will long be remembered for her efforts in local prevention of blindness activities as well as her welfare work for the blind.

Current Articles of Interest

Unexplained Amblyopia as a Military Problem, Capt. Joseph W. Hallett, Medical Corps, Army of the United States, *The Military Surgeon*, August, 1946, published monthly by Association Military Surgeons of the United States, Washington, D. C.

In this study of 51 cases seen in 1944, representing 0.55 per cent of the new patients referred for ophthalmologic study and treatment during that year, there was an absence of pathologic changes which challenged the diagnostic acumen of the examining physicians. The best obtainable corrected visual acuity was worse than 20/40, and since the question of continuance in military service or a reclassification of duties was involved, a comprehensive routine for examination of these patients had to be devised. About three-fourths of all cases presented visual field changes and the correlation between tubular fields and functional nervous disorders was particularly high.

Pterygium. Its Nature and a New Line of Treatment, Dr. Sabri Kamel, *The British Journal of Ophthalmology*, September, 1946, published monthly by the British Journal of Ophthalmology, Ltd., 24-27 Thayer Street, London, W.1, England.

A true pterygium is a pathological encroachment of part of the bulbar conjunctiva exposed in the palpebral fissure over the cornea, but how or why this fold encroaches on the cornea is still a problem. McReynold's tucking operation is the operation in vogue in Egypt, but this appears to be a symptomatic treatment of the condition, as in 30 to 50 per cent of the cases there is recurrence a few months later. In these recurrent cases, diathermy coagulation of the blood vessels, transplantation, mucousgrafting or total excision are also employed. Of 600 cases, treated in the last six or seven years according to Dr. Kamel's method, which is done in three steps—(1) cut the connection between the fold of the conjunctiva and the cornea; (2) undermine the whole area of the pterygium up to the caruncle; (3) cauterization of the connective tissue found on the under-

surface of the conjunctival fold—no recurrences were observed, with periodic follow-up.

Hysterical Amblyopia. Its Differentiation from Malingering, E. R. Yasuna, M.D., *American Journal of Ophthalmology*, May, 1946, published monthly by the Ophthalmic Publishing Company, 837 Carew Tower, Cincinnati.

The testing of peripheral visual fields was the most important aid in diagnosis. The author feels that differentiation between hysterical amblyopia and malingering is possible and that treatment depends upon the correct diagnosis. From fifteen cases studied at the separation center at Fort Snelling, Minnesota, the author concludes that disability ratings should be based on the severity of the hysteria and not on the amount of visual or field loss.

Effects of Atropine Sulfate, Methylatropine Nitrate (Metropine) and Homatropine Hydrobromide on Adult Human Eyes. A. V. Wolf, Ph.D., and H. C. Hodge, Ph.D., *Archives of Ophthalmology*, September, 1946, published monthly by the American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

The authors describe the mydriatic and cycloplegic effects of atropine, methylatropine nitrate and homatropine, with consideration of dosage, time for maximal effect, and the approximate time of recovery. They have found that homatropine had less mydriatic and cycloplegic effect than either of the other two drugs, and recovery from its effects was the most rapid. Methylatropine nitrate had significantly less mydriatic action than atropine. The cycloplegic action was about the same as that of atropine.

The Aging Eye, Conrad Berens, M.D., *New York Medicine*, August 20, 1946, published twice a month by the Medical Society of the County of New York, 2 East 103 Street, New York 29, N. Y.

It is the author's belief that many eye changes commonly regarded as senile are really caused by infection or other extraneous influences. He says in part: ". . . Many eye conditions associated with and often attributed to the aging process can be retarded in their development by the most careful mental, physical and laboratory studies of our patients when combined with long-continued measures to improve their mental and physical health and the

condition of their eyes." Space is devoted to a general consideration of geriatrics, as well as observations on certain dysfunctions.

Iritis in the Rheumatic Affections, Arnold Sorsby, M.D., F.R.C.S., and A. Gormaz, M.D., *British Medical Journal*, April 20, 1946, published weekly by the British Medical Association, Tavistock Square, London, W.C. 1, England.

Iritis is not the only ocular manifestation of the rheumatic infections. However, the association of iritis with joint affections in general and the rheumatic arthritides in particular raises two questions: "Is there a physiological parallelism between the eye and the joint in the reaction to exciting agents; and what is the nature of the inflammation which produces the nonpyogenic joint reaction and the nonpyogenic intraocular inflammation?" After making a study of 123 patients with osteoarthritis, 52 patients with ankylosing spondylitis, 332 patients with rheumatoid arthritis and 313 patients suffering from various other forms of rheumatic disease, the authors conclude, "There is undoubtedly some parallelism in the reaction of the eye and the joint to a noxious agent. The problem of intraocular inflammation is similar to that of inflammation of the joint."

Treatment of Glaucoma with Di-isopropyl Fluorophosphate (D.F.P.), Phillip Robb McDonald, M.D., *American Journal of Ophthalmology*, September, 1946, published monthly by the Ophthalmic Publishing Company, 837 Carew Tower, Cincinnati, Ohio.

Although the signs and symptoms of glaucoma are fairly uniform, treatment—whether surgical or medical—cannot be standardized. The patient is treated by objective findings, as little is known of the etiological basis for the disturbance. With the introduction of a new miotic, di-isopropyl fluorophosphate, a valuable adjunct in the treatment of glaucoma may have been found.

In a series of 82 patients representing 122 glaucomatous eyes, uncontrolled by previous miotic therapy, D.F.P. successfully controlled 57.4 per cent of the eyes. Despite its advantages, there are disadvantages in using this drug, so it is suggested that it be used judiciously and the correct dosage be determined for every patient. However, if tension does not drop within 48 hours, the author advocates that other measures be substituted.

Book Reviews

THE EYE MANIFESTATIONS OF INTERNAL DISEASES. I. S. Tassman, M.D. St. Louis: The C. V. Mosby Co., 1946. 614 p. ill.

In a concise and comprehensive and at the same time simple manner, Dr. Tassman describes and illustrates a number of eye conditions by colored and black and white photographs. The book is an essential contribution to the general practitioner's knowledge of eye diseases in internal medicine. As the author states in his preface, he made an attempt in this book to bridge the gap between the eye manifestations and internal medicine and thereby serve the needs of ophthalmologists as well of general practitioners.

The first part describes the normal structure of the eye and its adnexa, routine tests, and methods in examining the eye. It consists of five chapters, two of which are devoted to structural abnormalities. The manifestations of lids, conjunctiva, cornea, iris, lens and retina are briefly described so that the beginner may get acquainted with the diseases of the eye.

Chapter VI is devoted to congenital malformations and hereditary ocular conditions. The general diseases like Tay-Sachs', Nieman-Pick, Von Recklinghausen's, and other diseases and the eye manifestations are described and well illustrated.

Infectious diseases, syphilis, tuberculosis, and eye symptoms and signs are the contents of Chapters VII, VIII and IX. Virus and fungi infections, and ocular parasites are described in the next three chapters. One chapter is devoted to the eye manifestations of chemical and drug intoxications.

Chapters XV and XVI describe diseases of the cardiovascular system and of the blood; the eye manifestations are illustrated beautifully with Kodachrome pictures. Disorders of menstruation and pregnancy, metabolism, and endocrine gland disturbances are described in the next two chapters. Diseases of nutrition, avitaminosis diseases of the nervous system, intracranial tumors, and the accompanying eye signs and symptoms with illustrations of defects of the visual fields are briefly presented in three chapters. The final

two chapters are devoted to diseases of the skin, and of the bones of the skull.

The material is well organized, the print is easy on the eyes, and the book is a very desirable addition to the library of the internist as well as of the ophthalmologist.

—OLGA SITCHEVSKA, M.D.

MEDICAL SERVICES BY GOVERNMENT. Bernhard J. Stern, Ph.D.
New York: The Commonwealth Fund, 1946. 208 p. \$1.50.

One of the studies of the New York Academy of Medicine Committee on Medicine and the Changing Order, this book summarizes medical services provided directly or indirectly by local, state, and federal agencies at the taxpayer's expense. The organization and nature of governmental services are outlined with a view to their historical development. Mention is made of the states in which health departments or welfare departments have provided services for trachoma patients, and of the remarkable progress in trachoma control in the U. S. Indian Service as a result of using sulfonamides. It is interesting to learn that at least fifteen states have established refraction clinics.

The monograph is recommended as a factual account of governmental administration of medical care programs. Size of type and the quality of paper are such as to make for easy reading.

—FRANKLIN M. FOOTE, M.D.

NURSING IN COMMERCE AND INDUSTRY. Bethel J. McGrath, R.N.,
New York: The Commonwealth Fund, 1946. 356 p. ill.

This book is written for the practicing industrial nurse and deals with her duties and responsibilities. In the chapter, "Occupational Accidents and Hazards," vision and lighting are discussed; these are further enlarged upon in the chapter on sight conservation, written by Miss Mumford, a former staff member of the National Society for the Prevention of Blindness. This chapter deals with the condition of the workers' eyes, visual appraisal, follow-up of vision tests, preventing eye injuries, treating eye injuries, diseases of the eye, signs of eye trouble in adults, rehabilitation, compensation, and community resources for eye care, and adequately covers questions which may arise concerning the care and treatment of eyes in industry.

Contributors to This Issue

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Mrs. Winifred Hathaway, associate director of the National Society, is well known to REVIEW readers, and is author of the book, *Education and Health of the Partially Seeing Child*.

Book Reviewers: **Franklin M. Foote, M.D.**, is the National Society's newly appointed executive director. **Olga L. Sitchevska, M.D.**, is a practicing ophthalmologist in New York City.

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